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Inner Realities

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by

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PREFACE

Ideas flow freely. Vision coalesces. Imagination has been set free to seek its own rewards. Value as a total being has been established. So has this experience changed me that I am for the first time satisfied and fulfilled by my accomplishments.

The thesis experience has been the beginning; the building of a foundation upon which new experiences will follow. I was lucky enough to discover a point of departure through readings, guidance by my board members, and trust in my own intuition. This report and the exhibit of prints have meant an ending to the thesis project. And yet I am reluctant to say the project has ended, for the experiences have not waned. Every day I understand better what it is to see through the eyes and through the mind. Simple encounters take on relevance. One source of knowledge just leads to another, and another. And in writing of my experiences today, I am frustrated by the thought of omitting the new things I shall know tomorrow.

This report in no way takes the place of viewing the primary segment of this thesis: the photographs. This written report only supplements the images by explaining my technique, operating procedures, and philosophy towards the arts. It can only be hoped that through viewing the photographs, the visual language will speak when my own written description fails.

THESIS PROPOSAL

February 1978

Thesis Board: Professor Nile Root, Chairman
Dr. Richard Zakia
Mr. Martin Scott

Title: Inner Realities

Purpose of the Thesis:

I intend through this thesis to continue to analyze my visual communication process and produce an exhibit of prints using this personalized visual technology. I shall employ techniques of visual and mental perception to communicate sub-conscious expressions through realistic imagery.

Objectives:

1. to develop consistent photographic technique using zone system technology to allow for previsualization of imagery

2. to continue to build upon the visual foundation developed while working with Professor Root

    a. multiple meanings - what else it is
    b. artist/subject relationships
    c. visual, intellectual, intuitive, and emotional awareness
    d. conscious creativity/sub-conscious technique

3. to postvisualize imagery into sequences and/or groupings based upon formalistic, intellectual, or intuitive relationships or associations

Scope of the Thesis:

During the past three months I have discovered certain effective means of communicating using the photographic medium. Alfred Stieglitz, Edward Weston, and Minor White used realistic subjects to convey non-literal ideas. I have found personal relevance in each, but particularly in Weston's technique of

"significant presentation." By enhancing the illusion of physical depth--through tonal control, print surface, and choice of subject--Weston created psychological depth. Thus, realistic objects become abstract, demanding more involvement from the viewer. The techniques Weston used, and likewise Stieglitz and White in their "equivalents," can be explained in visual perception and psychological terms. By understanding these principles, I shall be able to utilize them in my own work. For this thesis I shall avoid a painterly approach, concentrating on definition of detail and transparency of print surface, recognizing qualities only available in photographs.

Zone system technology is important to significant presentation. I shall strive for consistent technical results to allow for previsualization of an image.

I have no preconceived ideas of subject matter. Working in familiar surroundings seems to yield the best photographs. Therefore, I shall be shooting in the Rochester area and near my home in Virginia. Approximately thirty fine prints will be prepared and as many exhibited as space is available in the graduate gallery.

Procedures:

I primarily intend to shoot large-format 4"x5" black and white photographs. On occasions when small-format photography is more effective or more practical, 35mm will be used.

In order to fully utilize the potentials of photographic materials, I have chosen FP-4 film and FG-7 developer for large-format and Panatomic-X developed in Rodinal for 35mm work. I shall be printing on Agfa Portriga-Rapid and Polycontrast papers. Since the thesis project will be an exhibit, prints will be 11"x14", 16"x20", or larger.

I have carefully planned my time to make a total commitment to the thesis Spring quarter. No other course work will be attempted. I expect to complete the thesis project by the late May exhibit date. Research and personal evaluation will take place throughout Spring quarter; the written report will follow.

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INTRODUCTION

> When people's eyes are open, they see landscapes in the outer world. When people's eyes are closed, they see landscapes with their mind's eye. People spend hours looking at outer landscapes, but there is just as much to see in inner landscapes. The landscapes are different, but they are equally valid.[1]

Language is the key to fulfilling human potential. It is through the organized structure that language provides that we are able to arrange thoughts into meaningful order to be assimilated and communicated. In the course of history we have developed highly specialized but adaptable systems of written words; words being symbols easily recognized within a culture. And along with the written word we have a corresponding spoken word, an auditory symbol; each an <u>equivalent</u> of the other. And yet we have often neglected to build a vocabulary of <u>visual</u> language, a language that may give clarity to understanding the complexities of this world.

In part this thesis is about symbols, equivalents and equivalence, and about a visual language that can be used to communicate the meaning of an experience. I did not know at the beginning of the project what the outcome might be or what images might result. It was necessary, however, to have a plan of procedure and a method of organization.

<u>Zone System Approach</u>

Photographic technologies are established. Adapting

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[1]Michael Samuels, M.D. and Nancy Samuels, <u>Seeing with the Mind's Eye</u> (New York: Random House, 1975), p.5.

those technologies to a personal operating procedure is easily done. The zone system approach provides the technology by which the photographic image can be controlled and matched to the mental image visualized at the time of the exposure. One of the objectives of this thesis was to establish a procedure for exposing and developing sheet film and then the fine print with maximum fidelity to the original experience. Naturally there were initial tests to be made with both equipment and materials. My light meter was calibrated, and my lenses were checked for shutter speed accuracy. The next step, establishing standard development times, although time consuming, was a simple enough procedure.[2] This procedure, once established and practiced, allows for control over the tones of an image within the limitations of the photographic process. And perhaps more important is that previsualization becomes possible because of predictable results. It is much easier to make a photograph when the mechanics of exposure do not absorb mental energies.

The result of the preliminary testing and zone system metering at the scene was consistently well exposed negatives. This is not to say that every negative was perfect and printed on normal paper. The negatives that were off in contrast usually were shot in severe situations. The problem was not in metering nor in developing and printing. My failure was in accurately judging which areas of the scene should be represented as Zone III (detailed shadows) and Zone VII (textured highlights). Color vision may have affected my judgement somewhat, but the errors were probably due to my inexperience in using the system. However, I am convinced that the zone system approach can free the creative photographer from the prepossessing and often chancy mechanics of exposure.

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[2] A technical description of this procedure with accompanying chart can be found in appendix A.

Thesis Organization

The zone system is one of several methods of organization adopted for this thesis. As in other aspects of life, I find it necessary to establish systems approaches. Whether I am organizing data on file cards or mentally organizing visual information in a scene, disorder is irritating and time consuming. I adapt systems to handle information input.

For example, in planning thesis procedures, I decided to keep a field diary. As I made a photograph, I recorded pertinent technical data and a sketch of the scene in a notebook. I also recorded a brief written account of psychological reactions to the event, suggestions for presentation, and titles for the photograph, if any. The diary became a valuable daily record of shooting, but I found it sometimes too time consuming.

Thoughts would come to me at any time. Readings would stimulate new ideas; sometimes they would come spontaneously. To organize these thoughts I outlined in broad catagories major topics I would discuss in the thesis. Then each thought and each reference was recorded under its appropriate topic heading using a numbering system similar to that used in literary style manuals. This structure allows for easy reference and cross-reference of information. No doubt many of the ideas I had and many of the relevant passages I found in readings would have been forgotten if not recorded in some orderly fashion.

The same necessity for systems of organization can be found in my seeing. It is easy to be confused by the complexities of nature. Gestalt psychology provides a system for relating line, color, balance, juxtaposition, and all the other visual elements to an organized, coherent visual structure. The complexities are made simple by systemizing using a newly found visual language. What was before a confusing array of natural objects becomes an ordered landscape. Love of life can only come from understanding, and understanding can only come from order. So the real importance of a systems approach is visual (psychological) as well as mechanical.

My Approach to Photography

Many photographic artists and critics have spoken of the virtues of the unmanipulated, "straight" photograph. While the photographs that I present in this thesis could fall into this catagory, it is not true that my work remains pure and authentic to this ideal.

The fact is that photography has not, does not, and never will objectively portray nature in all its complexity and infinite detail. Photographs are interpretations of nature that represent experiences of individuals. Photography is the medium that yields the closest thing to factual representation, and yet it is infinitely far from being that which it imitates. Black and white is better suited than color for abstraction because of the inherient reality color lends to photography. The black and white photographer communicates an experience through a print that is two-dimensional, monochromatic, distorted in perspective, usually enlarged or reduced in size, selectively focused, and quite often altered in tonal relationships; and many call this reality! Now, before I am accused of being a heretic, let me explain my understandings of this medium that I employ.

It is time that artists and critics accept the limitations of the medium and recognize its potential. I take issue with those that think photography is extraordinary and revolutionary. Photography is just one of many media. It is no more extraordinary than any other medium in its time. Each medium has its evolution. Photography will eventually be overshadowed by some as yet undiscovered technology.

Photography is not unlike painting or sculpting or drawing in that it has the capability of communicating the artist's abstract ideas and stimulating individual responces in the viewer. It can subjectively document a person's face just as can a painting. Photography can through abstract presentation stimulate our imagination and reveal an unrecognized inner potential within us all. But so can the other media. Photography is relatively instantaneous, a characteristic that makes it differ-

ent, but should not deny it its due respect as a valid visual medium. Perhaps artists who use other media, whether they will admit it or not, are offended by the ease with which an image can be made. I disagree with those that will not accept photography as a valid and serious art form. Arguments against photography seldom seem well-grounded. It is probable that the critic of this medium disdains the immediacy of the process. Do these same people reject their own work-saving tools of the trade as being restraints to creativity? We should rejoice in the technology that allows us freedom from drudgery and freedom to create. And we should not feel threatened that everyone with a camera becomes an artist, no matter how automated the camera might be. This is as ridiculous as saying everyone that draws or paints is an artist. It all boils down to creativity and imagination; the artist being one that can communicate through his or her own unique perspective a fresh interpretation of life experience.

Photographers have traditionally chosen one of two schools of thought: the straight, purely photographic approach expounded by Paul Strand and Edward Weston, or the manipulative, "painterly" approach practiced by Jerry Uelsmann, Man Ray, and others. Advocates of each approach rarely accept the opposing view. Some critics like to classify photographers as either formalists or anti-formalists, depending on the artist's belief or not in the finished print as an art object in itself. Recently a new set of classifiers have been used by curators and critics: "mirrors" and "windows."[3] The first term refers to those artists that use photography to reflect upon themselves; the latter term refers to those that document the world they see although not primarily revealing themselves through their works. While classifying terms may help in drawing relationships between photographers and their works, in the long run they can only restrict free thinking. A careful analysis of any body of work will reveal an overlapping of approaches. In

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[3]These terms originated with John Szarkowski in his Mirrors and Windows show at the Museum of Modern Art in 1978.

the politics of photography the independent photographer finds virtue in all schools. I align myself with this party, although non-alliance is usually thought of as a weakness in style.

Since I have already shown that "straight" photography is in fact manipulative by the very nature of the photographic process, a new definition is in order. Prior to beginning this thesis I decided that the experience of seeing and the related mental, emotional, and intuitive responses became an event in itself. Photography became a way of interpreting the event. After the event has ended, after the exposure has been made, nothing can be added to the photograph by way of unfaithful manipulations. If the photographer presents the truth of his experience--this is not necessarily the reality of the scene--he has done his duty. This may require dodging and burning, tone modification, multiple exposures, or even tonal reversals. Nature has created; the photographer only interprets. And an interpreter is justified in modifying an image if that modification better portrays the truth that is the photographer's vision. This to me is straight photography. The joy and amazement is in being able to interpret an abstract concept through a relatively unmanipulated visual image.

Inner Realities

Black and white photography reinforces the theoretical. While all photographs are documents of the objects or scenes they portray, black and white photographs inhibit the reality that color photographs exhibit. It is therefore easier to see through the document and into the underlying essence. Several techniques can be utilized to open the window to the photograph's true purpose.

Edward Weston called it "effective communication." It means providing the least number of obstacles for the viewer to hurdle in seeking the inner truth of the artist's work. First, print surface should be transparent so the full range of tones will be seen. Glossy paper is appropriate. Next, the illusion of depth should be maximized through awareness of lighting ef-

fects and perspective control and through extended tonal scale. Here the zone system approach becomes invaluable in bringing the brightness range of the scene within the limits of the photographic paper and film. Presentation of the work is also important to the viewer. Print size must be appropriate for the viewing distance and detail revealed in the photographs. The viewer must have the freedom to move within the picture area in a fashion similar to the photographer scanning the scene before him at the time of exposure. This requires detail in virtually every part of the image, and thus large format, sharp photographs are essential.

One might assume that in providing the maximum amount of image detail; in allowing freedom to scan, select, and interpret; and in utilizing all available formalist techniques for presentation, that documentation was the single, ultimate goal. However, these techniques merely become mechanical prerequisite for offering the inner reality which lies within. If properly presented the conscious observer may enjoy both aspects of the photograph. The fact that a photograph appears on the surface as a document does not negate the viewer's deeper involvement with the photograph on emotional, intellectual, and intuitive levels. Of this Rudolf Arnheim said, "In a work of art, the generalities are not hidden when we contemplate the particulars; nor do we need to abandon the realm of concreteness in order to grasp abstraction."[4]

Now, the question becomes content; is there in fact something within to be found by the viewer? Many of the photographs that I took for this project were successful in disclosing that inner reality. Others were not successful, being weak in substance and unclear in purpose. I shall pick several photographs to discuss in detail in the next section.

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[4]Rudolf Arnheim, Toward a Psychology of Art (Berkeley: University of California Press, 1966), p. 220.

ANALYSIS OF PHOTOGRAPHS

Very often when the viewer of a particular photograph is asked why he or she likes that picture, the viewer responds, "I don't know; I just like it." Most people are not aware of what is happening in their mind that makes them find a photograph appealing. To come to an understanding of visual perception, it would help to know the principles of Gestalt psychology. Gestalt provides a "language" of formal elements of structure that help the viewer read the image. Composition is more than just framing the photograph with borders. The right combination of visual elements within carefully selected borders, like the right set of letters and words within a sentence, provides ease in communicating the photographer's message. I have chosen three distinctly different but representative photographs for specific analysis.

World Line

Of the three photographs I shall analyze, World Line is the most pleasing. It best displays the conceptual equivalent of the depicted physical structure, in this case intersecting railroad tracks.

At the scene the focal point for seeing became a magnetic center for me to mentally and visually explore. There was no hurry for me to set up the camera; the tracks were allowing me ample time for contemplation and discernment. Intuition was impelling me to make the photograph. On the ground glass the image seemed to lock in as if there was only one possible compositional choice. This required a position directly above one rail and very near the intersection; a vulnerable position had a train been approaching. Sidelighting provided the needed modeling of form and definition of texture.

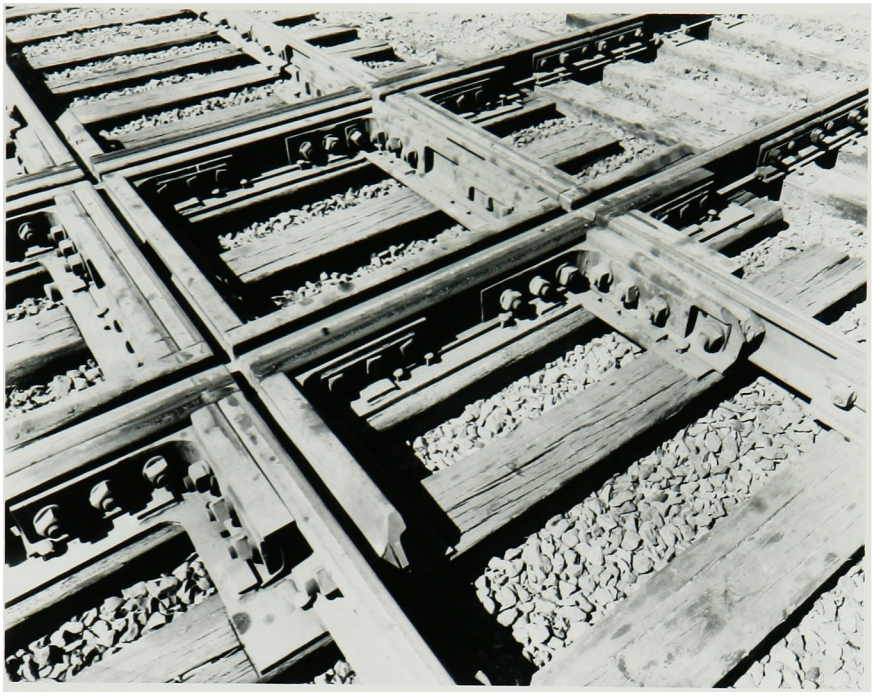

Figure 1. World Line

World Line relies heavily upon continuation of line. The impression must be made that in any of four directions, the tracks continue infinitely. The tracks intersect at the greatest possible angle in three-dimentional space indicating opposing directions. Pairs of rails are seen as symmetrical, parallel tracks. The tracks are seen as two intersecting lines with the center square becoming the point of intersection. Strong contrast and deep shadows add to the hard edged mechanical character of the objects and separate details from background.

It is necessary to be able to view the railroad crossing as intersecting lines in order to assume my interpretation. Of all possible points in the universe, these lines have chosen to cross at this exact, specific point. That intersection becomes an event, not necessarily a special event, but an event worthy of recognition anyway. In an equivalent event, for example, let's say I am walking down a street when I accidentally bump

into some unknown person. My line intersects the other person's line and an event occurs. Something may be learned from the event: I see the man wears black shoes; he sees that I have a camera around my neck. Nothing more than that may occur. But, this event has become a part of my life experience! This is worthy of recognition and appreciation.

Of course, intersections and events are taking place constantly for every person and every thing. The greater the event the greater the impact on our lives. Photographs have become momentous events in that the objects of my photographs and I intersect at some point, and I have found value in recognizing the object's right to existence. The intersection of lines carries no judgement, no emotion, no sentimentality. To an inanimate object it is just an event; only I can have any opinion as to the value of the event. The significance of World Line is its conceptual equivalent: natural events which collectively carve life experience.

Mind Space

Mind Space has had more impact on viewers and attracted more controversy than any other photograph taken during this thesis period. It has remained one of my favorite photographs mainly for the technical achievement and the faithfulness to my mental image. Obviously, many of those that have seen the photograph share my perception of the night sky, even if it does not exactly match real life tonal relationships.

Technically the photograph is deceptive. It's a double exposure photograph under two very different and difficult lighting conditions. But that is beside the point if the photograph meets the viewers perception and their personal reality. My reality required that a photograph of the night sky over a darkened landscape would have to have the following elements: a genuine star pattern in a recognizable constellation, no movement in the star images, a dark but detailed landscape, and a transparent sky. From a technical standpoint this is not easy to do.

Figure 2. Mind Space

My plan for documenting the mental image called for two separate exposures on one sheet of film. The first exposure was of the constellation Orion, one of the most easily recognized star fields. When we view stars in nature, there is no apparent motion. In order to photograph the stars without streaking the images, it was necessary to counteract the motion of the earth with a motor driven telescope mount. The exposure time required was twenty minutes. Attention was paid to the alignment of the camera so that the position of the stars would appear exactly as they do near the horizon. The exposure was made as the constellation neared the horizon so that stars in the lower third would gradually be blocked by thicker atmosphere. Some bright stars did overlap the foreground detail in the finished negative; they were retouched in the print. The first exposure was not sufficient for the background sky to fog the film as much as one zone because of the moonless, late-night sky. Several sheets of film were exposed that night.

The second exposure took more careful planning to yield the proper tonal relationships. The camera had to be placed on a tripod for a stationary platform. The next evening I attempted to use the light of a crescent moon to light the scene from the right and the late dusk glow on the horizon to separate the mountains from their background. Relatively short exposure times were needed if star streaks were to be avoided. And at the short exposure times the moonlight was not sufficient to light the foreground. The actual luminosity was less and the contrast greater than that perceived. An alternative plan was devised.

In a second attempt the foreground exposure was made at dawn with the breaking sun lighting buildings and landscape. The light provided just enough modeling in the mountains to give shape and depth. The sky would have been recorded too light if it had not been for the use of contrast filters. Natural polarization gives a gradation to the sky above the horizon. A red filter would darken the blue sky appreciably. The decision was to use both the red filter and the polarizer to bring the upper sky to Zone I and the sky just above the horizon to Zone III. The remainder of the scene was unaffected by the filters and fell into a range from Zone I for deep shadows to Zone VI for the white houses. Expanded development increased the contrast slightly in the low values of the mountains, made the gradation in the sky values more pronounced, increased the contrast in the star images, and brought out the white buildings and light foreground field. That one and only negative, difficult as it was to make, printed with a little dodging and burning-in to provide a photograph to match my perception.

Why did I choose to include foreground landscape in the picture, and why did I want a horizon glow? The illusion of depth is difficult enough in the real life scene at night. Looking straight up provides nothing upon which to draw size relationships. Mountains we know for their size. So I chose to use something familiar as a basis for judgement. Now if the

sky were all black, no visual element would place the stars behind the mountains. The horizon glow outlines the mountains and provides a background; the mountains in effect overlap the sky. Continuity of tone and "surface" of the sky makes us perceive the entire sky as behind the mountains, therefore very far away. This is one important way depth can be portrayed in a subject that relies on faith for the illusion of depth.

The horizon glow also gives tone to the empty sky furnishing an illusion of transparency. The glow depicts atmosphere which becomes a transparent object through which the stars shine. In a solid black background stars are just white spots on a two-dimensional surface. Transparency provides the third dimension in which stars can "float" at different distances from the viewer. The larger star images appear closer, the smaller images recede far to the distance. These are subtle ways of giving an illusion of depth and a sense of realism to the photograph.

It was not intended that Mind Space should imitate the works of any other artist. However, some of the first reactions insinuated that I had plagiarized Ansel Adams' Moonrise-Hernandez. It was not until I heard these comments that I even considered the possible similarities. Formally they are somewhat alike: predominantly low-key, high contrast images. The bright white buildings in my photograph, as objects, stand out just as the cemetary markers do in Mr. Adams' photograph. It is with these points--to me trivial coincidence--that similarities cease.

In Mind Space the buildings are just objects in the landscape, useful as scale references, but little more. In Moonrise-Hernandez we see the cemetery crosses as symbols that reinforce the spiritual, surrealistic nature of the cloud formation. Specific objects--the moon, the clouds, the crosses-- create visual impact. Mind Space has no visually strong objects. Its impact comes from the combination of all elements. This image is a field, no one point attracting attention or suggesting symbolism. Viewing pleasure is a continuous sensation rather than a climactic event.

This vision does have prerequisites: a free and open mind and no expectations. This may not sound like much to ask, but too many people are so intent on experiencing only excitement that they miss the smaller, more significant events. The old adage about merchandise, if it's free it must not be worth much, expresses the attitude of many persons toward vision. What nature offers freely can be rewarding and fulfilling for those who would open their eyes and minds.

Rest-Energy

Rest-Energy has some unique qualities that deserve special attention. The nostalgic subject matter should not segregate this photograph from the other thirty-five in the exhibit. It continues to be one of the most enjoyable to study for structure and implied motion.

The composition found itself on the ground glass. Just as if there was a board fence with only one knothole to see through, there seemed to be one exact camera angle and position. A photograph made prior to this exposure and from a point several feet away failed to show the dynamic structure this vantage point reveals. No element exist to demonstrate activity: no people moving about, no wind in the trees, no motion in the cars. So where is there motion?

Rudolf Arnheim has written that the shape of objects, their juxtaposition, and the balance in the composition will either induce or hinder a perceived motion response.[5] Perceived motion may be caused by eye movements, memory associations, and/or dynamic structure. Rest-Energy makes use of each technique to induce a sense of impending motion and stored energy.

The dynamic patterns at work in this composition are most obvious. Three cars point into the center of the frame. In the closest car we see a pattern of three metalic stripes of different lengths that have a forward thrusting effect. The

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[5]Ibid., pp. 74-89.

Figure 3. Rest-Energy

curving fenders create a swirling movement response. One lawn chair that faces us directly contains a pattern of geometrically receding squares that creates an illusion of depth. These shapes lead us in and out of an imaginary tunnel. A wedge of grassy lawn thrusts us left as the cars redirect our vision right creating motion perception through eye movement.

Eye movements play the greatest role in creating a motion illusion. Three similar cars overlap; the shapes repeat. Each car has white rimmed tires that again repeat and cause shifting eye movements. The wedge of lawn and the cars create a swirling movement near the center. Dark objects on the left, the cars, and on the right, the bush, keep our eyes bouncing across the center. The telephone lines provide tracks for our vision to dance between trees. When our eyes move from the larger tree to the distant tree, we are also moving in and out. The same is true of the cars' wheels. Different sizes create the depth illusion so our perception is of three-dimentional

movement: in and out, diagonally, and laterally.

Motion could be implied by the associations of cars with movement. This is evident in Rest-Energy only to a lesser degree for the cars have no drivers and they are parked against a curb that will allow no further forward movement. We know though that they could be moved; they have potential just as the trees will bend with the wind and the chair will rock. What we have is a state of dynamic equilibrium. Forces of tension and compression balance, yet remain ready to spring loose in all directions should the laws of nature fail.

The framing of this picture is intentional. Not enough of the motel building is visible to document the location. The cars are cut in half by the left-hand border that eliminates documentation of their lines. This specific framing creates an abstraction, an abstraction needed for fuller involvement by the viewers imagination.

Some of the fun of this photograph is knowing that it was taken in 1978 rather than in the fourties. Perhaps this creates, for me at least, a surreal sense of timelessness. I was privileged to be at the point at which elements of architecture and automotive design from another era reappeared in time. Rest-Energy expresses the essence of that event.

The Other Photographs

Several other photographs deserve comment as well as the body of work as a whole. The psychological responses to the scene were different with each situation, yet the general approach was consistently straight-forward and photographic.

The most fulfilling situations were those when some intellectual concept was clarified. Wormhole, for example, helped me understand several cosmological theories dealing with black holes, space/time, and evolution of the universe. The image became a way of visualizing what I had read about and imagined in my mind's eye. The light at the end of the tunnel represents new worlds of knowledge available if only the imag-

ination will accept the challenge. Other photographs that work in this conceptual mode include the clock (photograph #2), Man's Favorite Sport, and World Line.

Some photographs elicit deeper emotional appeal. Examples are Mother and Child, grasses (#35), puppies (#34), and pine boughs (#24). War Hero is perhaps the best illustration. I do not know who is buried beneath these markers or even if he was a soldier. Since there is no inscribed headstone, the remains could be thought of as an unknown soldier. I thought of the futility of war and the senselessness of dying this way.

The frozen dog photograph (#16) has been understandably disturbing for many viewers who see the picture as gruesome or grotesque. The photograph is not about death as much as it is about the living and their response to and awareness of death. Living in the country puts one in a position to see this type of scene quite often. One learns to accept mortality. I was saddened to see this dog, but less so because of the non-violent way it died. The one thing that does disturb me is that the dog might have been abandoned by its owner, as indicated by the collar. I have not violated this dog by recording its death. A straight-forward approach is the only appropriate method of recording this situation.

Occasionally, my response to a scene is primarily visual. Form and structure are exciting. So I use the ground glass to find the best composition of lines and shapes available. The landscape with clouds (#8) is such a photograph. It is beautiful and dramatic; a moment to be savored by the eyes. Photograph number eleven is similar in effect except that the unusual cloud form excites the imagination to attribute monsterish characteristics to the clouds. In doing so, size relationships become ambiguous. The clouds may be larger than the mountains! Unusual tonal relationships add surrealism to the image. Our mind's eye picks up where our sight leaves off.

The most difficult approach for me to understand and adopt is the intuitive approach. It would be easy to lump every picture that didn't fit into another catagory into this

intuitive approach. The ice and fog photograph (#25) does not stir my emotions. It has a loosely defined structure that approaches confusion. However, it has been the favorite photograph of many viewers and it has strong appeal for me. The unfamiliar character of an ice storm led me to the location, but the specific composition seemed instinctive. It was as if I had yielded to my subconscious self to analyze and select the subject for the photograph. I can explain only fragments of my understanding of the situation; much remains unknown. I want to trust in my intuition to occasionally provide me with subjects to photograph. Weak composition, though, can not be justified because the subjects came intuitively.

The complete body of work becomes a foundation for continued work in this mode. Since the exhibition I have taken many more photographs that are exciting and fulfilling. My goals have been reached, but the pleasures of seeing have just started.

ON BOUNDARIES

Photographs and other two-dimensional works of art are physically closed systems; that is, they have borders that restrain our vision within a specific area. The act of visualizing and photographing a scene implies selection by the photographer of what information shall be included in that image. It is this selection that makes the difference between the artist and nature.

In choosing what objects and scenes to photograph, the photographer also decides the shape and position of the boundaries. The boundary is that edge where information essential to the photograph stops and superfluous information in the remaining environment begins. Two opportunities are available for establishing borders: the first by cropping the image in the camera at the time of exposure and the second by cropping the negative in the printing stage. The shape and position of the borders greatly affect the viewers perception of the photograph. Traditionally, horizontal or vertical rectangles with a one to one and one quarter ratio have been used as standards for photography.[6] However, other shapes of formats have been used, most notably the square shape of medium format cameras and the round shape of fish-eye lenses and the early Kodak cameras. What are the effects of these image shapes?

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[6]This is based on the standard sizes for photographic papers being 8"x10", 11"x14", 16"x20", 20"x24", etc. Interestingly, if one of these sheets is bisected along the short dimension, the resulting sheets have dimensions in the ratio of five to eight. This ratio (approximately) is known as the "golden mean" and can be found in nature and throughout history in man-made arts. For an interesting article on this ratio see William Hoffer, "A Magic Ratio Recurs Throughout Art and Nature," Smithsonian, December 1975, pp. 111-124.

The rectangular shape is thought of as aesthetically pleasing as long as one dimension does not exceed the other by more than about sixty percent. This shape can compliment and dramatize vertical or horizontal subjects. On the other hand, a rectangular image that is excessively tall or wide can create a lack of acceptance by viewers who see the shape as confining or unnatural. Square formats neutralize the reinforcing effect provided by rectangularly shaped boundaries. The square shape makes the viewer achieve any psychological change from the subject alone. The circular and oval frames are also neutral but more closely approximate the effect of human sight.

The human eye is a remarkable and fascinating organ. If one closes one eye to eliminate depth perception, the other eye acts as an extreme wide-angle, rectilinear receptor. In this situation if we "focus" on one spot in the distance, our peripheral vision enables us to see far to the sides and top and bottom in a circle of about one hundred sixty degrees and only interrupted by our nose. However, only a very small angle of acceptance will be sharply detailed: that portion received by the centrally located fovea. The remaining portion is less and less sharp at increased angles from the center spot. Our mind fills in blanks in peripheral vision so that we can sense and maybe identify large objects to the side but cannot see their details.

The photographer could make images that were only sharp in the center and less sharp near the edges. The photograph would appear normal if our visual attention could be held on that one central spot. But our eye must be able to roam a scene that is detailed in all areas. Our perception of a scene is a quick composite of many scanning movements of the eye. Our perception is of overall sharpness because of these eye movements. The natural parallel for photography would be to render the image in sharp detail throughout.

Viewing distance becomes important at this point. In a real sense our eye can make movements at wide angles. Unless

we are very close to the photograph or the photograph is very large, eye movements equal to those of the actual scene would not be possible within the borders of the print. A curved, wrap-around photograph would imitate natural vision (except for depth perception), but this is not practical. Large detailed photographs are necessary for exhibition. For this thesis I made large prints--11"x14" and 16"x20"--based upon an average viewing distance of three feet. Large format photography provides the detail if the viewer wants to move in for closer examination.

The location of each border is important. In many of the images careful consideration was given even when cropping ever so slightly. Each scene seems to have set its own boundaries, edges at which superfluous information stopped and relevant information began. This required visual study of the subject and exploration via the ground glass image. Occassionally, the photographic negative was not cropped exactly like the previsualized mental image. The rectangular porportions might not have been right or camera vantage point may not have been optional. I do not hesitate in such situations in cropping the negative to achieve a print that approximates my mental image. The end justifies the means in this instance.

Photographing a scene is attributing significance to everything within the frame and denying significance to everything outside at that moment. Borders are established around the significant information. However, in nature all objects are of equal importance no matter how large, how beautiful, how fragile. Arnheim said it this way: ". . . the visual world presents itself as a continuum, devoid of clear-cut breaks, and expanding beyond any frame."[7] If photographs have to have borders, then I should try to present subjects that create mental pictures that have none. I believe Mind Space does just that. While the edges of the physical print are confining, the stimulated mental image expresses the limitlessness of

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[7]Arnheim, Toward a Psychology of Art, p. 182.

space. The mind's eye can create an image that does not require boundaries.

INNER REALITIES

External reality, the objective facts of existence, can be supplemented in the human perception by a second, personal, inner reality. Information about an object, non-analytical and non-interpretative, will be either accepted or rejected by the individual psyche based upon a perceived reality. External realities are singular, bounded, and inflexible. Inner realities, on the other hand, are open to various interpretations and modifications at the will of the unconscious mind as expressed through imagination.

In photographing a natural structure such as a melting ice form (photograph #4), is the reality that specific frozen structure or can the reality be the symbolic images in the mind's eye? For this photographer, reality is a combination of both the external reality supplied by the ice sculpture and its environment and the internal reality supplied by symbolic associations. The experience of the event is more than mere recognition of the external reality. In speaking of "what else it is," a concept of equivalence, one must be able to experience an event on several different levels. Photographs, at the very least, provide visual documentation of the external reality. But contemplating the event can reveal inner realities which may lead to greater personal understanding.

External reality is a shared phenomenon while inner realities are entirely personal. Anyone may see a cloud as an amorphous collection of water vapor hovering at specific layers of atmosphere. We all share this reality for which science has provided rational explanation. But what of the poet, the philosopher, or the painter that sees the cloud as a dynamic, living creature of nature or as a symbol of stability in an otherwise turbulent existence? Reality for the artist will

include all that he brings to his perception from his imagination--an act of creativity. Individuals may find relevance in their own interpretation above and beyond the external reality of the event.

A basic need for man is to feel that he is not alone in his perception of the world around him. Events are perceived by people in ways similar to all. For example, few would not agree that flowers are beautiful. Perceiving beauty is a common human experience. However, we do not <u>see</u> beauty, we <u>perceive</u> beauty, a difference caused by the input of value judgements. There is no beauty (or truth, or any other value judgement) in nature that is not the product of the analytical mind functioning in response to both external and inner realities. To record "the thing itself" requires not faithful documentation but loyality to perception. ". . . the work of art symbolizes all levels of reality that lie between the phenomenon and the idea."[8] Even allowing for individual differences in perception, people are remarkably alike in their psychological responses. Unless the artist has lost all touch with external reality, others will recognize the common human experience represented in a photograph. Minor White was in touch with his inner self when he said:

> Reality is not to be avoided, it is to be penetrated to its other side. Perhaps the other side of reality is exactly the world the painter seeks in his own way of altering the visual world. The camera, however, targets on reality and stops down to get beyond.[9]

Getting in touch with the inner world isn't difficult nor is it psychologically unwise. Drugs have been used by all cultures and at all times in history to enter the world of the unconscious. Other safer methods can be used with equal success. I have found that entering into a visual experience with no preconceptions and no impositions allows for free communi-

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[8]Ibid., p. 221.

[9]Minor White, "Your Concepts Are Showing," <u>American Photography</u>, May 1951, p. 296.

cations between the object and myself. Drug induced imagery does not allow for the union of the unconscious with external reality. By allowing nature to speak its visual language, the attentive viewer may better understand the importance of his individual perception of external reality.

Other artists have expressed similar techniques. Edward Weston used contemplation and concentration on the ground glass image. Minor White gave this advice: "Be still with yourself, until the object of your attention affirms your presence."[10] James Joyce continually switches from the present to past remembrances or to fantasies in his novels, for he thought memories and fantasies were just as real as external reality. Samuels refers to the effects of visualization by commenting:

> Henri Rousseau's paintings show that he was in contact with the coherent inner world which was as real to him as the external world. It is said that he used no specific exercise to get in touch with his visualizations and drew no hard and fast line between inner and outer.[11]

Each photographer will express a different purpose for making pictures. I have discovered that involving my psychic self along with my physical self with objects creates an experience, an event. Photography creates a deeper involvement at the time of exposure and later in viewing the print. An experience I had in making a photograph since the exhibition may help in clarifying my position.

The scene was an abandoned limestone mine, a huge man-made cave gutting a mountain. It was a challenge to my fears to enter the cave, but I continued to explore as far as the light from the entrance would carry. I was becoming involved in seeing a radically different world of cold rock, distorted scale, and dark recesses. Emotions ran deep. At the far end of one tunnel, still in line with the light from the entrance, I found a lake. Naturally, the surface of the water was ab-

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[10]Minor White, Mirrors, Messages, and Manifestations (Millerton, N.Y.: Apeture, 1969), p. 42.

[11]Samuels, Seeing with the Mind's Eye, p. 134.

solutely still, revealing a mirror image of the rock walls and ceiling. The intensity of the experience matched my inner fears with the quiet reality of the cave. I set up the camera. It was difficult emotionally for me to remain for several six minute exposures. Leaving the mine was a relief, and yet the experience had been exhilarating and fulfilling. Anticipating seeing the print later added to my sense of personal accomplishment. I knew the photograph would not be a document of the cave alone; it would be a record of the total event.

The print enables me to re-experience seeing the beautiful subterranean world and feeling the same emotional intensity. My inner realities, manifest in fears and apprehension, were modified by the external reality of the natural rock surfaces. The experience would have been incomplete, in fact not human, if it were not for the involvement with my inner self.

Figure 4. Limestone mine

COSMOLOGY AND THE PHOTOGRAPHIC IMAGE

Many of the photographs taken during this thesis year are titled with terms of cosmology: wormhole, world line, rest-energy, space/time, etcetera. Some mysteries of the universe are beginning to unfold. Science is beginning to piece together the jig saw puzzle that will tell us of the past and more accurately predict the future. Awareness of the expanse of the universe seeds imagination. The possibilities conceptualized by the cosmologists nurture imagery. Occasionally the theoretical concepts of universal evolution seem understandable as a result of earthly visual experiences. It is in these intellectually exciting moments that I sense that I understand some cosmological concept based upon an equivalent terrestrial phenomenon. New freedom for my imagination has been found reaching beyond the edges of the universe.

One such event happened with the previously described photograph of a tunnel through a mountain titled Wormhole (photograph #1). I had walked through and driven through this tunnel hundreds of times before making this image. By quietly studying its entrance in preparation for taking the photograph, I remembered a concept I had read, the concept of "wormholes." Some astronomers speculate that black holes, extraordinarily dense collapsed stars, may be the entrances to time tunnels. Wormholes cross space terminating perhaps thousands of light years away but in a time that to us would be past. An object falling into a black hole would instantly fall through the wormhole to another part of the universe. Astronomers have imagined that this could account for the evolution of the universe: stars falling into black holes, thrust back in time to another part of space, evolving over billions of years only to fall into yet another black hole. The cycle goes on forever. There is no

evidence to either prove or disprove the theory. But the concept at least is very exciting. I could now see the earth-bound tunnel in symbolic terms. My tunnel could be an avenue to knowledge--light is knowledge--or it could be a pathway from conscious to subconscious, from reality to fantasy. The angle of view, directly in front of the entrance, entices the mind, if not the body, to sample the delights of a new world at the end of the tunnel. My imagination can not resist all the possibilities offered by this one experience.

Albert Einstein has supposedly said that mystery is the only true source for art and science. What can be more mysterious than the alien worlds of the infinitely large universe or the infinitely small subatomic particles? Neither is part of our perceived world because of the narrow scale with which we are accustomed. Only our imagination can react to either such a small or such a large scale. Rudolf Arnheim puts it beautifully this way:

> Man's senses are geared to a particular range of magnitude, located between the atomic and the astronomic realm, and in this realm we observe conglomerations of shapes that lack most of the simplicity found at other cosmic levels. This intricate landscape is our reality in the most immediate sense. But it is not the only reality to which the human mind can refer. Whether, in trying to answer the question: What is reality?, we look at what is close at hand or what is remote, apparent to the eye or hidden, superficial or essential, shaped or unshaped, is a matter of philosophical outlook or, aesthetically, of style.[12]

It is my style to see the universe in every tree, in every mountain, in every star.

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[12]Arnheim, Toward a Psychology of Art, p. 183.

APPENDIX A
DETERMINING EXPOSURE AND DEVELOPMENT TIMES

For film development standardization I used a procedure suggested in Arnold Gassan's Handbook for Contemporary Photography. That procedure is as follows:

Step 1. Find the film's true film speed. For this test a number of exposures were made of a gray card on Ilford FP-4 film, metering so as to place the 18% reflectance gray side in Zone I. Various exposure indexes were used to yield a series of barely perceptible densities. The film was developed in Edwal FG-7 developer diluted 1:15 according to the manufacturer's recommendations. The density which was the lightest and yet perceptibly different from the film base was chosen as representative of Zone I and the true film speed, in this case ASA 125.

Step 2. Find a standard exposure for paper. A second strip of film was prepared by shooting a gray card and developing as before. But this time the exposure was adjusted to place the gray card in Zone II. The reason for Zone II instead of Zone I is that Zone I can not be printed on photographic paper except as solid black. On paper Zone II is the first perceptible change in density from maximum black. The minimum exposure time needed with the enlarger that shows the difference between Zone O-I and Zone II on paper is the standard exposure for paper.

Step 3. Determine normal film development. Several sheets of film were exposed exactly at Zone V but each developed at a different development time. Then the negatives were printed on photo paper using the standard exposure. The negative that gave a print that was closest to Zone V gray was developed normally. This step takes into account variations in enlarger contrast and lens inaccuracies.

Step 4. Prepare a graph of densities for various development times. Expose a series of sheets of film to Zones I through XI. Develop the film using normal development time just determined. Using a densitometer measure the densities of each zone, then plot the measurements on a development versus density graph. Repeat this same procedure for 50%, 75%, and 150% normal development. Again plot the resulting densities. Four series of test is enough to plot "parametric curves" for each of the eleven zones and Zone O, film base plus fog. The graph for Ilford FP-4 film developed in FG-7 developer diluted 1:15 (at 68°) is shown in Figure 5.

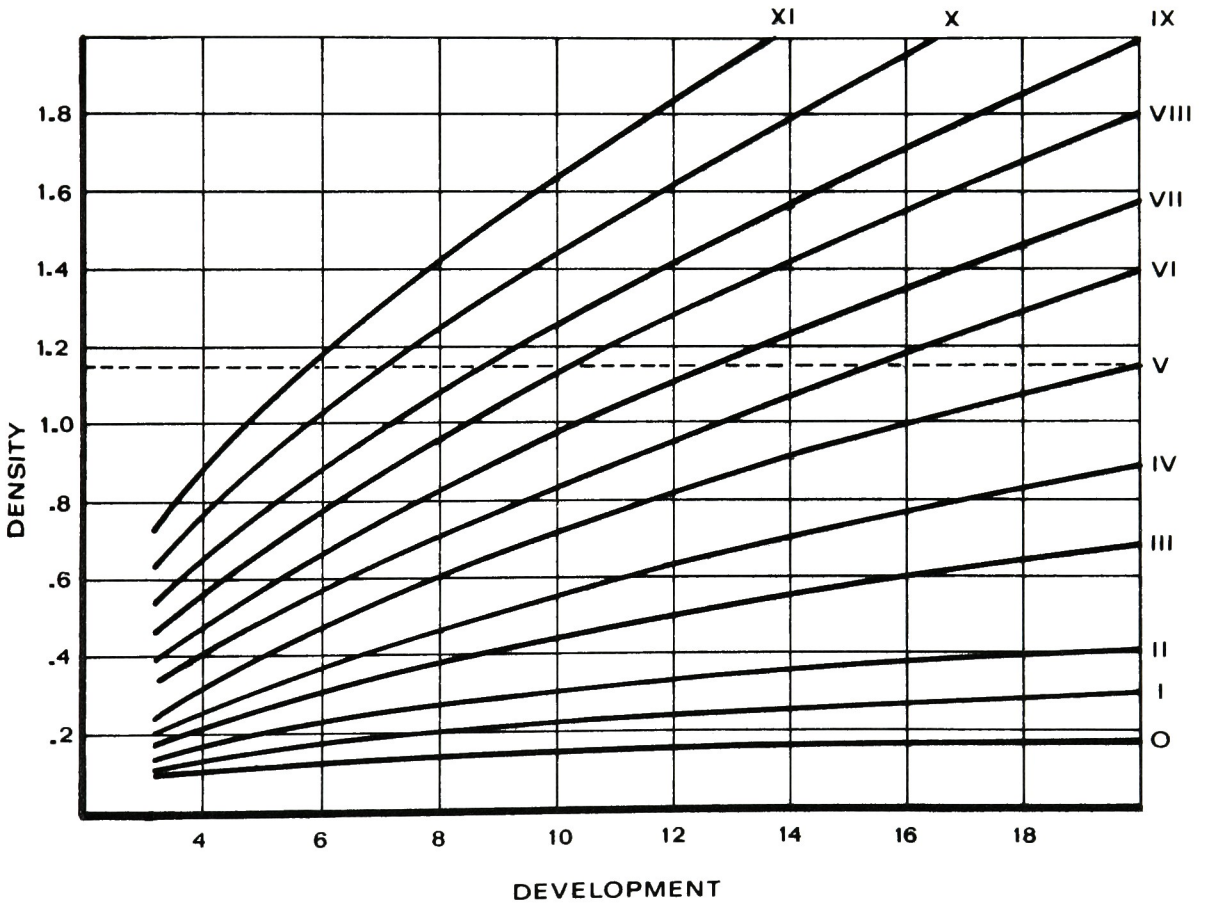

Figure 5. Parametric curve for Ilford FP-4 sheet film

Step 5. Determine exact plus or minus development times for expansion or compaction. In my tests normal development time was determined to be 10 1/4 minutes. It is necessary to look at Zone VIII print density to determine plus or minus development times. Zone VIII is the threshold between barely perceptible tones and brilliant white, the zone most affected by variations in development. As revealed in the accompanying graph, at normal development time Zone VIII yields a negative density of 1.15. For my enlarger and with my equipment a 1.15 density in the negative will print as Zone VIII at the standard exposure time on grade two paper. If normal minus (N-1) development is called for because of scene contrast, that is, a Zone IX subject developed to yield Zone VIII (1.15 density), then the new development time would be 8 3/4 minutes. 1.15 density becomes a baseline for determining expanded or compacted development. Of course, for any other enlarger system a new baseline would have to be determined.

Zone system metering becomes a very simple two point procedure. Deep shadows are metered and placed in Zone III. Then the bright highlights are metered to see where they fall. If they fall on Zone VII, then normal development is called for. If they fall on Zone VIII, then I use normal minus development; for Zone VI I use normal plus, and so forth.

One other bit of fine tuning was necessary. With expanded development Zone III density increases slightly. In order to maintain a rather stable Zone III density, I find it necessary to increase exposure in high contrast situations and decrease the exposure in low contrast situations. This adjustment affects all zones equally thus pushing Zone VIII away from the 1.15 density baseline. Therefore a slight increase is added to normal plus development times and a slight decrease to normal minus development times. This in effect keeps the differential between Zone III and Zone VII at about 0.55 density.

APPENDIX B
SPECIAL PHOTOGRAPHIC FORMULAS

Cold Tone Paper Developer

Water (125°F)	750.0 cc
Metol	2.7 grams
Sodium Sulfite, anhydrous	40.0 grams
Hydroquinone	10.6 grams
Sodium Carbonate, monohydrated	87.8 grams
Kodak Anti-Fog #1 (benzotriazole)	1.4 grains (3 tablets)
Add cold water to make	1.0 liter

This developer is particularly suited for Agfa Portriga-Rapid paper yielding pleasing slightly warm but full-bodied blacks. It is identical to Dupont 54-D except for the use of benzotriazole instead of potassium bromide.

Amidol Paper Developer

Water (68°F)	750.0 cc
Amidol	6.6 grams
Sodium Sulfite, anhydrous	44.0 grams
Potassium Bromide	0.5 grams
Citric Acid	5.0 grams
Add water to make	1.0 liter

Amidol developer gives rich blacks with Kodak Poly-contrast paper (double weight) without going too blue in tone. Tones are nearly neutral; however, with Portriga-Rapid paper the tones are too olive for my taste.

Selenium Toning Bath

Water (68°F)	2.0 liters
Heico Permawash	70.0 cc
Kodak Selenium Toner	94.0 cc
Add water to make	3.0 liters

Prints are brought directly from the second fixing bath to this toner. Toning takes from 1 1/2 to 2 1/4 minutes at 68°F. I use one pint of solution for each 16"x20" print or equivalent.

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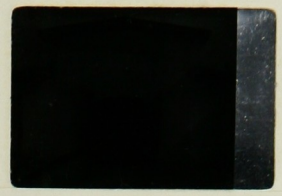
1 16x20
"WORMHOLE"
2 11x14
3 11x14
5 16 x 20
WORLD LINE
6 16 x 20
7 11 x 14
"REST ENERGY"
8 16 x 2
9 16 x 20
"MOTHER + CHILD"
10 11x14
11 11 x 14
12 16 x 20
13 11 x 14
14 11x14
15 16x20
16 11 x 14
17 11 x 14
"MAN'S FAVORITE SPORT"
18 11 x 14
"WAR HERO"
19 11 x 14
"MISS LOUISE'S HOUSE"

21 11x14

16x20 22



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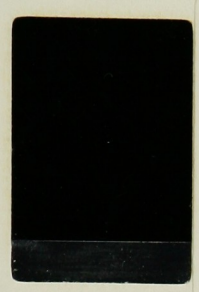
16x20 24

11x14 25



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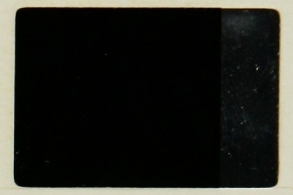

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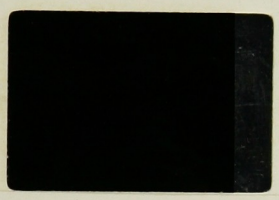

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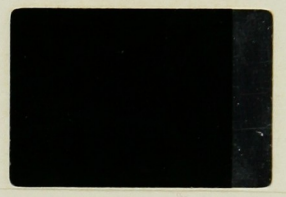

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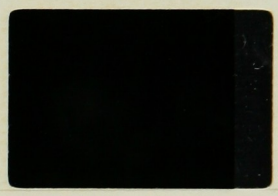

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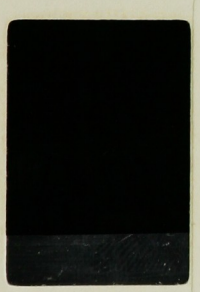

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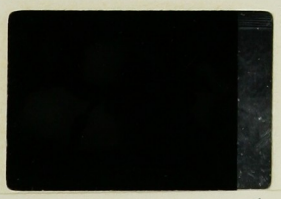

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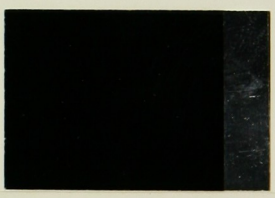
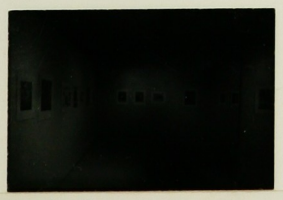


36 16x20

"MIND SPACE"

VIEW 1
MFA THESIS EXHIBIT



VIEW 2
MFA THESIS EXHIBIT

VIEW 3
MFA THESIS EXHIBIT

VIEW 4
MFA THESIS EXHIBIT